§ 121.53 Materials, construction, and repairs of boilers and machinery.

Materials used and the methods employed in the construction and repairs of boilers and machinery, and the design of boilers and machinery, shall be in accordance with the marine engineering regulations and material specifications of the U.S. Coast Guard, or the rules for building and classing steel vessels of the American Bureau of Shipping, or other recognized classification society, unless otherwise provided in this part.

§ 121.54 Preparation of boilers for inspection.

It shall be the duty of the chief engineer to have the boilers which are to be inspected filled with water, safety valves secured by clamps or gags, tubes swept, back connections and furnaces cleaned out, and the water in boilers at a temperature of not more than 180° F. for watertube boilers and not more than 100° F. for fire-tube boilers.

§ 121.55 Tests and inspections of new boilers.

All boiler tests and inspections of new boilers shall conform to the standards of the U.S. Coast Guard ''Marine Engineering Regulations'' (46 CFR, Subchapter F).

§ 121.56 Tests and inspections of boilers and main steam pipes in service.

All tests and inspections of boilers and main steam pipes in service shall conform to the standards of the U.S. Coast Guard ''Marine Engineering Regulations'' (46 CFR, Subchapter F).

§ 121.57 Inspection of mountings and attachments.

All valves on boilers shall be opened up every 4 years at the time of annual inspection or the next regular drydocking period thereafter. All valves shall be removed from the boiler at least once every 8 years to determine the condition of the stud bolts connecting the valves to the boiler. These examinations may be made at intermediate periods if there is any evidence to indicate that defects have started or excessive corrosion exists.

§ 121.58 Safety valves.

(a) At the annual inspection of each boiler, the marine safety inspector shall check the setting of each boiler safety valve and make any adjustments that may be necessary to keep the boiler within the maximum allowable pressure. After adjusting the boiler safety valves, the marine safety inspector shall seal each safety valve separately with the official seal of the Marine Safety Unit.

(b) Each chief engineer, upon taking charge of the power plant of a vessel, shall examine all safety valves and if any seals are broken, or there is any evidence that valves have been tampered with, he shall report same in writing to the Marine Safety Unit. If at any time it is necessary to break the seal on a safety valve for any purpose, the chief engineer shall advise the Marine Safety Unit in writing, giving the reason for breaking the seal and requesting the valve be examined, adjusted, and resealed.

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§ 121.59 Fusible plugs.

The inspector shall examine fusible plugs when inspecting the boilers. The number of such plugs inserted in each boiler, the manufacturer's name, and the heat number shall be included in the boiler inspection report.

§ 121.60 Water columns, test cocks, and water gages.

Water columns, test cocks, and water gages shall be carefully examined, tested and checked by the inspector at each inspection.

§ 121.61 Steam gages.

All steam gages connected to boilers or main steam lines shall be carefully checked for accuracy at each inspection.

§ 121.62 Safety valves or relief valves on reduced pressure lines, evaporators, etc.

Inspectors shall give the same attention and inspection to safety valves or relief valves installed on reduced pressure lines, evaporators, superheaters, feed water heaters, etc., as to the safety valves installed on the main boilers.

The setting of such valves shall be carefully checked at each inspection and adjusted if necessary.

§ 121.63 Guards in dangerous places.

Inspectors shall examine all places where there is a possibility of a person being caught in machinery to see that they are provided with substantial guards over such mechanisms as gearings and couplings, flywheels or generators, refrigerating machinery, etc.

§ 121.64 Unfired pressure vessels.

(a) Unfired pressure vessels in service which are fitted with manholes or other inspection openings so that they can be satisfactorily examined internally, shall be opened biennially and thoroughly examined internally and externally.

(b) Unfired pressure vessels which have neither manholes nor inspection openings and cannot be satisfactorily examined shall be tested biennially to a hydrostatic test of one and one-fourth times the maximum allowable working pressure.

(c) Unfired pressure vessels shall be protected by a relief valve set to relieve at a pressure not exceeding that for which the vessel is designed, and of sufficient relieving capacity to prevent a pressure increase exceeding 10 percent above the maximum allowable pressure. In no case shall the diameter of the relief valve be less than one-half inch.

(d) At each inspection period the inspector shall check the setting of the relief valves and make any adjustments that may be necessary to keep the pressure vessel within the maximum allowable pressure.

(e) As used in this part, ''unfired pressure vessel'' means a tank containing gas, vapor, or liquid, or a combination thereof, under pressure and not exposed to the products of combustion.

§ 121.65 Notice to the Marine Safety Unit of vessel on dock; alterations.

(a) Whenever any vessel under the supervision of the Marine Safety Unit is placed upon the dock for repairs it shall be the duty of the owner or responsible official to report same to the Marine Safety Unit so that a thorough inspection may be made to determine what is necessary to make such vessel seaworthy. No repairs or alterations affecting the safety of the vessel, either in regard to hull or machinery, shall be made without the knowledge and authority of the Marine Safety Unit. Notice of such repairs and alterations is necessary even if such work does not require the vessel to be placed in a drydock.

(b) When a repair or alteration ordered by the Marine Safety Unit has been completed the same shall be reported to the Marine Safety Unit in writing by the owner or responsible official.

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§ 121.66 Whistles.

Every inspected vessel under the supervision of the Marine Safety Unit shall be provided with an efficient whistle suitable for sounding the necessary whistle signals. Means shall be provided to operate the whistle from a position adjacent to the main steering station and from the remote steering station where such steering station is fitted. Details of the whistle operating devices shall meet the requirements of 46 CFR chapter I, subchapter J (Electrical Engineering).

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§ 121.67 Fog bells.

Inspected vessels 12 meters in length or greater, under the supervision of the Marine Safety Unit, shall be provided with an efficient fog bell. The bell, of corrosion resistant material, shall produce a clear tone at a sound pressure level of not less than 110 decibels at a distance of 1 meter. The diameter of the mouth of the bell shall not be less than 300mm for vessels of 20 meters or more in length, and shall be not less than 200mm for vessels of 12 meters to 20 meters in length. The mass of the striker shall not be less than 3 percent of the mass of the bell.

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§ 121.68 Engine signals; voice tubes.

Inspected vessels using bell signals between the pilot house and engine room shall have a tube, of proper size, so arranged as to return the sound of